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May 4, 2017

Via Email

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Ex Parte – Advanced Methods to Target and Eliminate Unlawful Robocalls -- CG Docket No. 17-59

Dear Ms. Dortch:

On May 3, 2017 representatives from the Alliance for Telecommunications Industry Solutions (ATIS) met with representatives from Chairman Pai's office to discuss industry efforts to combat unlawful robocalling, including efforts to progress the Signature-based Handling of Asserted information using toKENS (SHAKEN) framework.

During the meeting, ATIS provided an update on the industry's efforts to finalize the *SHAKEN Governance Model and Certificate Management* which defines the protocol to obtain Secure Telephone Identify (STI) certificates. ATIS also noted its on-going efforts to further refine the roles and functions of the STI governance authority and STI policy administrator. The written presentation discussed during the meeting is attached hereto.

In attendance from Chairman's Pai office were Jay Schwarz, Acting Wireline Advisor, and Zenji Nakazawa, Acting Legal Advisor, Public Safety and Consumer Protection. In attendance representing ATIS were Susan Miller, President and CEO; Thomas Goode, General Counsel; and Jim McEachern, Senior Technology.

A copy of this letter is being filed in the above-referenced docket.

If there are any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Goode", written in a cursive style.

Thomas Goode
ATIS General Counsel

cc: Jay Schwarz, Acting Wireline Advisor
Zenji Nakazawa, Acting Legal Advisor, Public Safety and Consumer Protection



SHAKEN Governance Authority

Susan Miller

*CEO & President
ATIS*

Jim McEachern

*Senior Technology
Consultant
ATIS*

Tom Goode

*General Counsel
ATIS*

May 3, 2017

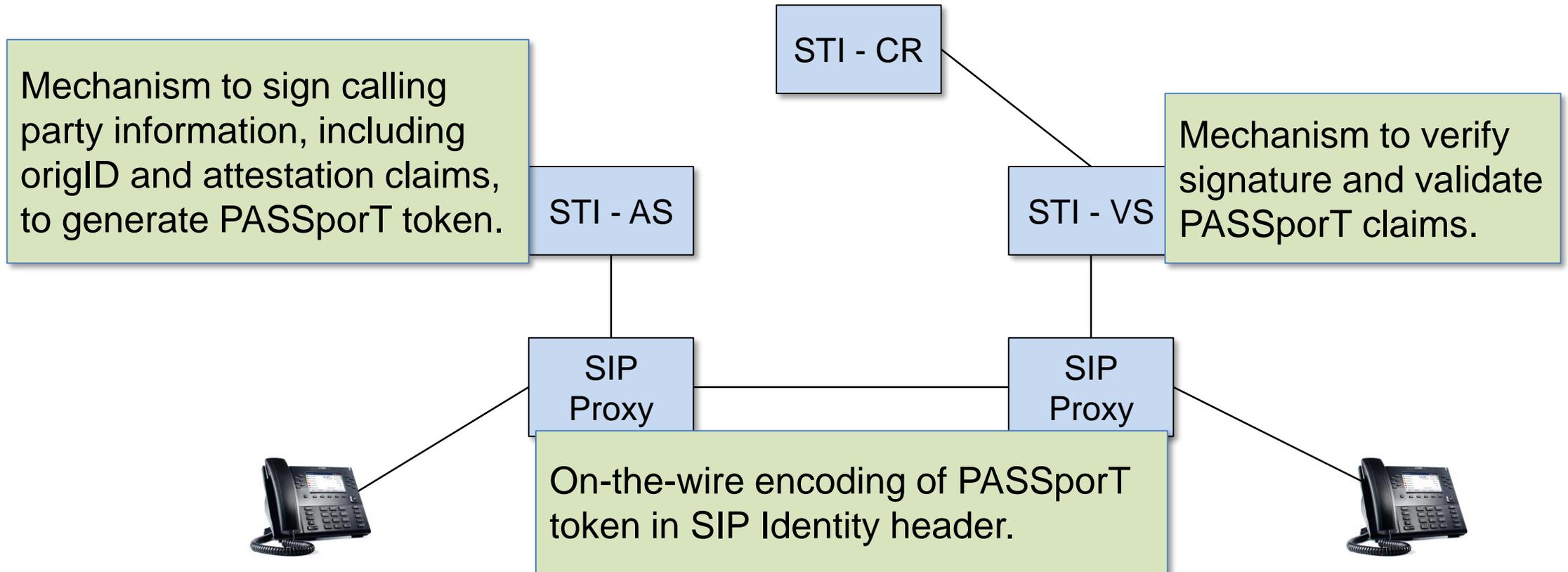
Background

- There are 2.4 billion robo-calls every month.
- Robo-calls are the #1 consumer complaint to the FCC.
- More than 1 in 10 U.S. adults has been a victim of a phone scam.
- IETF STIR (Secure Telephone Identity Revisited) was chartered to address this problem.
- The ATIS/SIP Forum IP-NNI TF initiated SHAKEN to develop a deployable mechanism for service providers.
- STIR and SHAKEN have been merged into a single specification, with SHAKEN focused on service provider deployment.
- This presentation provides detail on SHAKEN development.

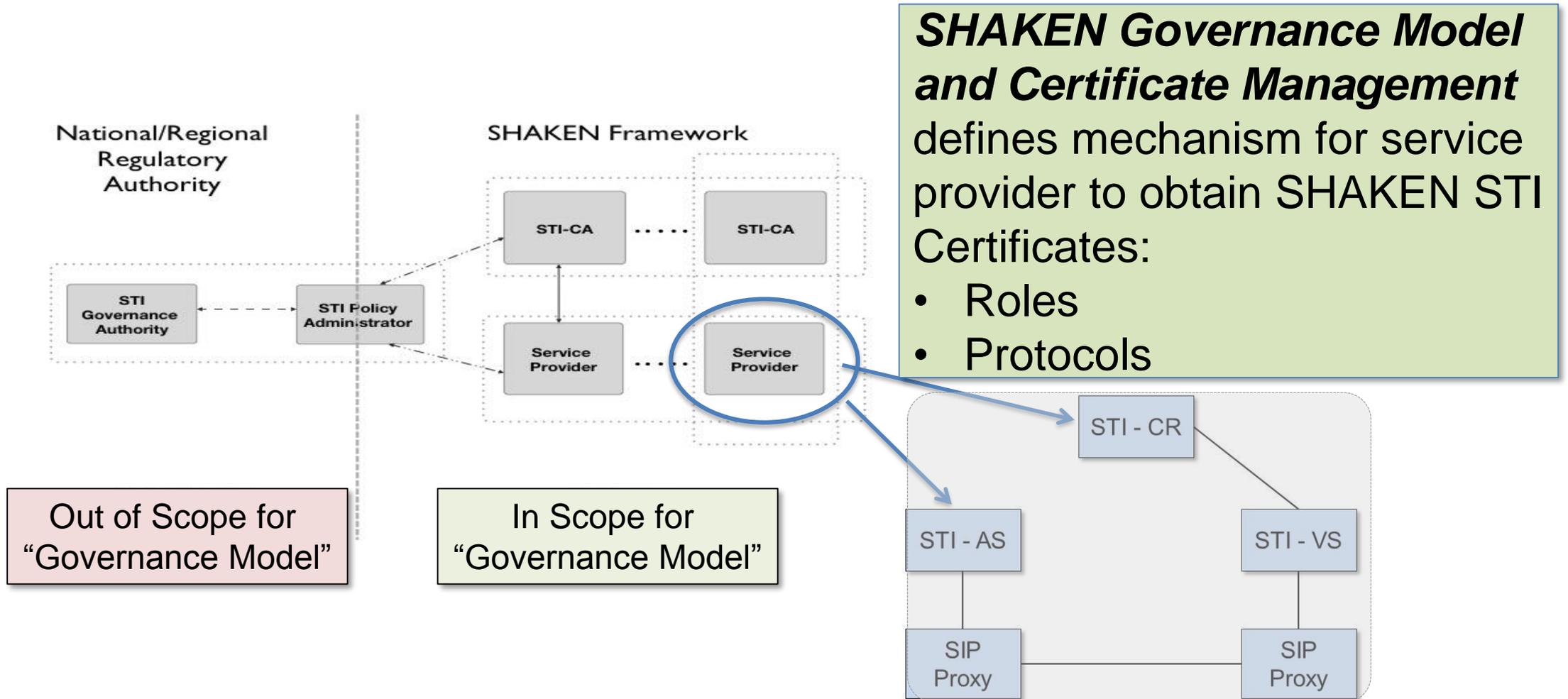
Current Status

- Significant progress on the protocols required to deploy SHAKEN:
 - **SHAKEN** provides the on-the-wire encoding for SIP identity header: January 2017
 - **SHAKEN Governance Model and Certificate Management**, defines the protocol to obtain STI certificates: June 2017
- SHAKEN deployment:
 - Initial focus will be to gain operational experience
 - Volume deployment beginning in 2018
- Formal Governance Authority:
 - Not essential for initial deployment between “cooperating” service providers
 - Will be critical as deployment increases

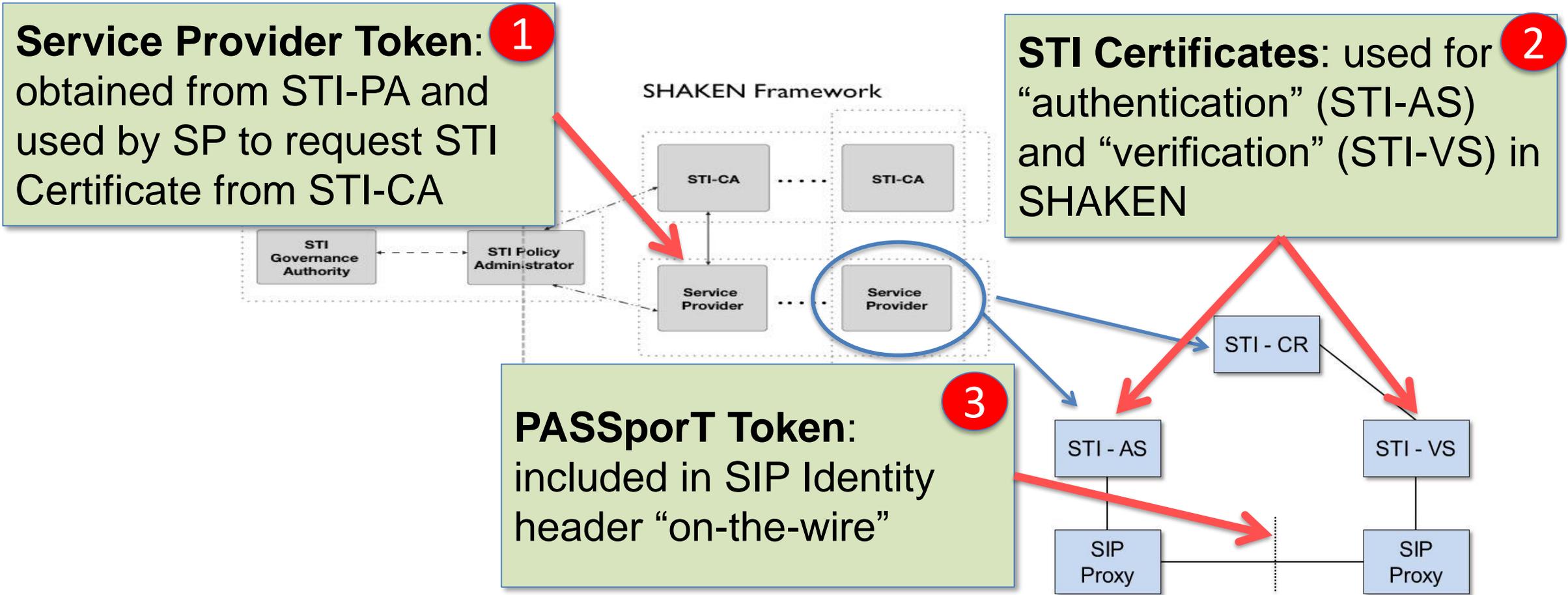
SHAKEN: Published January 2017



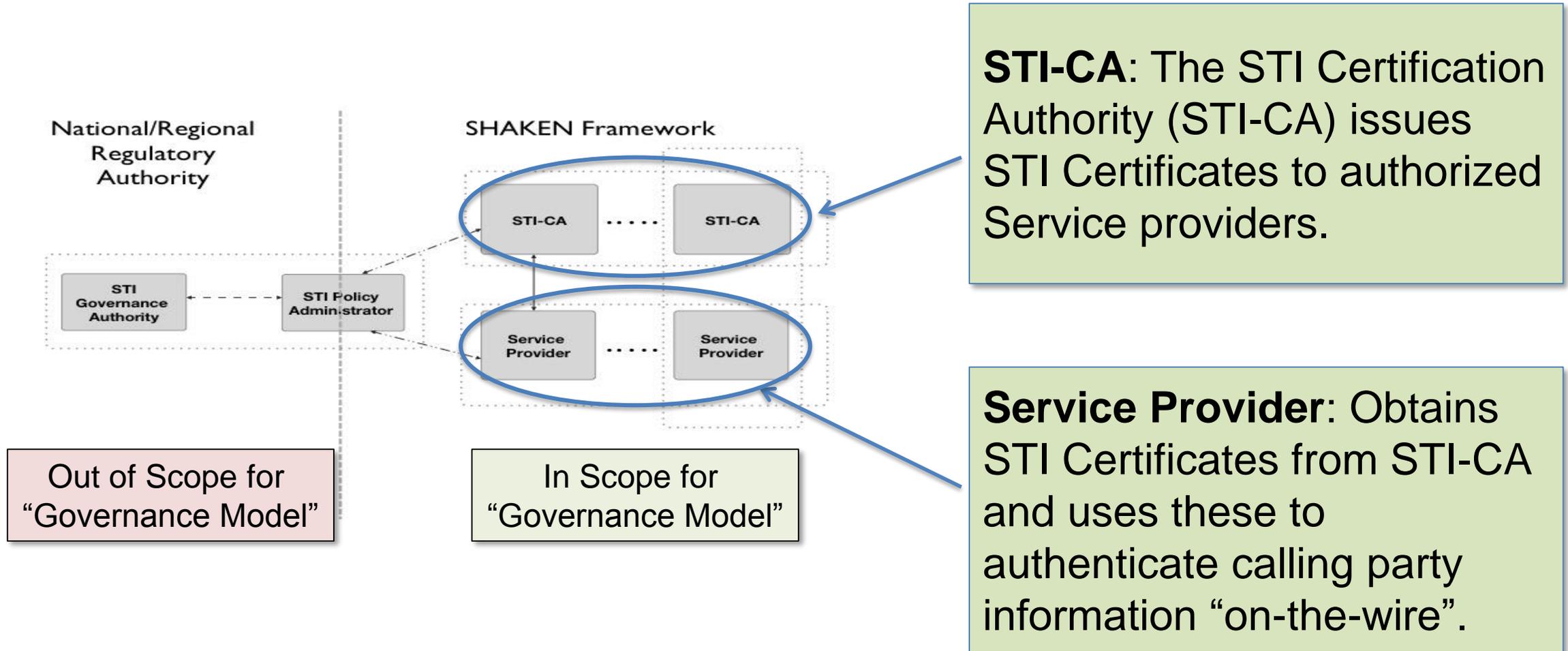
SHAKEN Governance Model Ecosystem: June 2017



SHAKEN Terminology

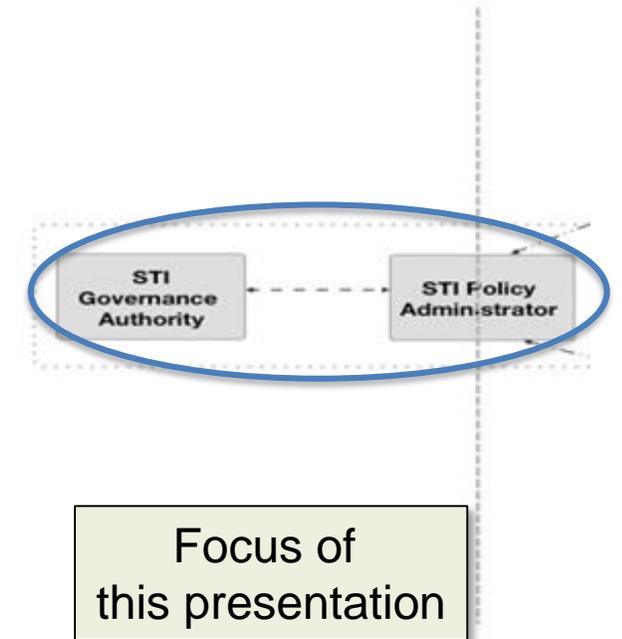


SHAKEN Governance Model: Defined Roles



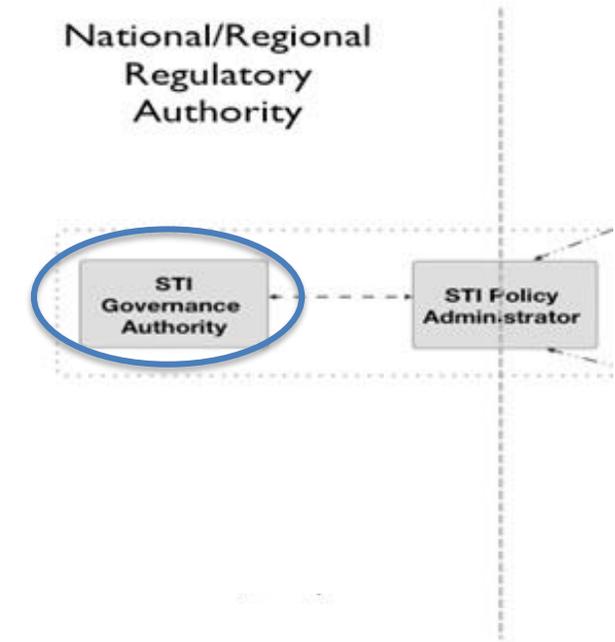
SHAKEN Governance Model – Key Roles

- Key roles in SHAKEN Governance model:
 - **STI Governance Authority (STI-GA)**
 - **STI Policy Administrator (STI-PA)**
- These roles are identified and relationships noted but details are stated to be “out of scope” for the SHAKEN Governance Model document.
- Further industry work is needed to “flesh out” the details of these roles separate from the development of the protocol for obtaining certificates.



Role of the STI Governance Authority

- STI Governance Authority:
 - Defines the rules governing STI Certificates:
 - Who can obtain STI Certificates (i.e., criteria)
 - Basis for revoking (if required)
 - Criteria for STI Certification Authority (STI-CA)
 - Selects the STI Policy Administrator
 - Would consult technical experts when developing rules:
 - ATIS' PTSC, INC, NGIIF, Testbeds FG
 - ATIS/SIP Forum IP-NNI Task Force
 - One governance authority per country
 - Industry-based and consensus driven



Role of the STI Policy Administrator

- STI Policy Administrator:
 - Applies the rules as set by the STI Governance Authority
 - Validates that individual service providers are authorized to obtain STI Certificates
 - Based on criteria defined by STI-GA
 - Issues “Service Provider Token” to authorized service providers allowing them to request STI Certificates
 - Valid for a period of time (e.g., one year)
 - Approves STI Certification Authorities (STI-CA)
 - Maintains a secure list of all authorized STI-CAs
 - May host STI Certificate Repository (STI-CR) for public keys



Criteria for Governance Authority

- Neutral industry body, representing a full range of stakeholders:
 - Service providers: large, small, competitive, fixed, mobile, cable, VoIP, OTT
 - Vendors, including third party application providers
 - Others?
- Use open, multi-stakeholder, consensus-based processes.
- Recognized by the national regulator, but independent:
 - Consider regular briefings to regulator
 - Engage input from regulator
- Streamline operations and processes and minimize costs:
 - Not for profit

Advantages of Multi-stakeholder, Industry Consensus-Based Solution

- SHAKEN governance ecosystem will need to be flexible and innovate as the industry gains experience and robocallers/spammers respond with new strategies:
 - Identify and stop service providers if they abuse the system
 - Develop rules for “corner cases” (e.g., WebRTC, resellers, etc.)
 - Extend SHAKEN to introduce new functionality:
 - CNAM, NS/EP support, Biometric authentication
 - Enhanced traceback
- A neutral, multi-stakeholder, consensus-based, industry body is best-positioned to provide this flexibility and innovation while ensuring accountability.

SHAKEN Governance Authority based on industry consensus.

Governance Authority: Several Approaches Considered

- Regulatory Mandate Approach:
 - FCC performs the role of STI-GA; operation of GA codified in rules
 - FCC performs or contracts with entity to perform STI-PA role
- Industry “Committee” Approach:
 - Multi-stakeholder industry body to serve a STI-GA
 - Operation of STI-GA developed via transparent, consensus-based processes
 - STI-GA selects/oversees STI-PA
- Hybrid Approach:
 - Multi-stakeholder industry body to serve a STI-GA
 - Operation of STI-GA developed via transparent, consensus-based processes
 - FCC validates industry body and authority of STI-GA to oversee operations
 - Formal liaisons and updates on operations provided to Commission

Other Possible Models

- While some in the industry are suggesting that the NANPA could be a suitable model for the STI-GA, there have been significant concerns raised regarding this model because:
 - Combining NANPA and STI-GA would not provide significant value, and could be a distraction.
 - Similarities between NANPA and STI-GA are minimal; differences are significant:
 - NANPA manages numbers and number ranges; STI-GA “authenticates” SHAKEN service providers.
 - NANPA requires a flexible, scalable solution; STI-GA allows same solution to apply to all carriers.
 - NANPA tracks all number assignments/reassignments with complexity proportional to the number of potential telephone numbers; STI does not track numbers and complexity is proportional to the number of carriers.

Next Steps

- Complete specification for **SHAKEN Governance Model and Certificate Management**:
 - Scheduled to be sent to Letter ballot mid May
 - Approved and published late June
- ATIS to continue work defining the Governance Authority role:
 - Strong industry support for governance principles
 - Will continue developing industry consensus on governance details
 - Further briefings will be provided to the FCC

Questions?

Susan Miller

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Supplemental Slide

Abbreviations

- **STI-AS:** Secure Telephone Identity Authentication Service
- **STI-CA:** Secure Telephone Identity Certification Authority
- **STI-CR:** Secure Telephone Identity Certificate Repository
- **STI-GA:** Secure Telephone Identity Governance Authority
- **STI-PA:** Secure Telephone Identity Policy Administrator
- **STI-VS:** Secure Telephone Identity Verification Service